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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,634	09/05/2006	Vittorio De Nora	MOLO679	3108

7590 04/08/2008

Jayadeep R Deshmukh
458 Cherry Hill Road
Princeton, NJ 08540

EXAMINER	
BELL, BRUCE F	

ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
04/08/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,634	DE NORA ET AL.	
	Examiner	Art Unit	
	Bruce F. Bell	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 29 are vague and indefinite with respect to the anode comprising a cobalt containing metallic outer part". It is unclear to the examiner if this outer part is the substrate or not from the instant claim and specification as set forth. It appears from applicants examples that this "metal outer part" is not an "outer part" at all but rather the substrate on which the electrochemically active material is formed.

Claims 2-28 are dependent on claim 1 and therefore have the same deficiencies.

Claim 29 is further vague and indefinite with respect to what component of the cell that is being instantly claimed, since there is a laundry list of parts. Should applicant maintain that this is proper, then the examiner will impose a genus of species election.

Claim Objections

3. Claim 25 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 25 does not further limit the cell since the cell has not positively recited that it has an electrolyte and further since and electrolyte and the processing temperatures are not a part of the cell features. Applicant will probably argue that the electrolyte is a part of the cell features, however, unless the cell is a closed cell wherein the electrolyte can not be removed, it is not a part of the cell per se as the cell can be used with various other electrolytes as can be seen by the prior art to Kishi et al (5954928) used in the 35 USC 102(b) rejection below.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 5, 7-11, 15, 16, 24, 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Kishi et al (5952928).

Kishi et al disclose a metal substrate of either stainless steel, nickel, cobalt, iron and steel. See col. 3, line 66 – col. 4, line 3. The patent discloses an activated cathode that has a substrate on which a first layer which contains nickel or cobalt as a main component is formed on the metal substrate and wherein the nickel or cobalt are in the form of an oxide. See abstract. The patent further discloses a second layer deposited on the first layer and being that of fine platinum or ruthenium particles. See col. 3, lines 16-40. Further it discloses that the ruthenium particles are oxidized. See col. 3, line 45.

The prior art of Kishi et al anticipates the applicants instant invention as set forth above. Applicant will probably argue that their instant invention is an anode, not a cathode, however, this is an apparatus claim and the term "anode" only indicates how the electrode is connected into the circuit and therefore, the final product electrode could be either an anode or a cathode. Its intended use is given little or no patentable weight. The recitation in claims 2,7 and 8 with respect to the integral oxide layer having a porosity is met by the prior art of Kishi et al since the phrase "up to 12%" has been used, which means that the integral oxide does not have to have any porosity at all (i.e. it can be zero). Therefore, this aspect of the invention has been met. Since the first layer is specific to the layer being cobalt oxide, it appears that the percentages in the instant claim have been met, since it appears that the layer is 100% cobalt oxide, since that is the only constituent mentioned being on the substrate. With respect to claims 9-11, it appears that the CoO layer is electrochemically active as set forth in the Kishi et al patent and that the protective layer is that of a ruthenium or platinum layer since the platinum is not easily oxidized and the ruthenium has the ability to transform to ruthenium oxide and revert back to ruthenium when there is current applied. The interior first layer could also be considered to be the protective layer to protect the substrate which is known in the art. The anode is shown to have a protective layer of the platinum or ruthenium and that depending on which one is used, the ruthenium can form an oxide passivation layer. With respect to claim 24, the Kishi et al patent discloses the use of the cathode in an electroplating cell and since the cell as instantly claimed does not have to be used for electrowinning of aluminum, since it is the cell structural features that are being claimed, it appears that Kishi et al meets the requirements of the instant claim as set forth. Claim 29 shows a cathode component having a cobalt oxide and therefore meets the

instant claims as set forth. Therefore, the prior art of Kishi et al anticipates the applicants instant invention for the reasons set forth above.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 5, 7-11, 18, 19, 22, 24, 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Lim et al (5248510).

Lim et al disclose a nickel electrode having a porous nickel substrate and a cobalt oxide passivation layer on the nickel substrate. The cobalt oxide is applied to the nickel substrate by contacting the substrate with an aqueous solution of cobalt nitrate, removing the excess solution and heating the substrate in an oxygen environment to form cobalt oxide. See abstract. The nickel substrate is heated in an oxygen containing atmosphere of air to a temperature sufficient to convert the cobalt nitrate to cobalt oxide. The heat treatment is at a temperature of from about 300 to about 400 ^{0}C for about 15 to 20 minutes. See col. 4, lines 58-65. The nickel substrate is impregnated within its open porosity with a mass of active material which is nickel hydroxide/oxide doped with 6 to 10 percent by weight of cobalt.

The prior art of Lim et al anticipates the applicants instant invention as shown by way of the disclosure above with respect to the instant claims as presented. Again, even though this is a positive electrode being recited in the Lim et al document, the final product electrode is the same

as the applicants electrode and it is immaterial as to the designation of "anode" or "cathode", since this is intended use of the electrode.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-17, 24-29 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 10, 11, 13, 23-27, 32-44, 48 of copending Application No. 10/591635. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application encompass those of the instant invention. The difference between the copending application and that of the instant invention is that the copending application claims the cell including the anode as set forth in the instant invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1, 4, 6, 18-29 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-8, 9, 33, 34, 36-47 of copending Application No. 10/591636. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application encompass those of the instant invention. The difference between the copending applications claims as that of the instant inventions claims is that the copending applications claims disclose that the electrical conductive substrate can be more than just a cobalt containing metallic outer part and sets forth that the substrate maybe Co in a dependent claim.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB
March 28, 2008

/Bruce F. Bell/
Primary Examiner, Art Unit 1795